

EMISSIONS OF TOXIC RELEASE INVENTORY LISTED CHEMICALS FROM MSW LANDFILLS AND FEDERAL RIGHT TO KNOW PROGRAMS

Andrew T. Lehman
Environmental Quality Management
Ogden Waste-To-Energy, Inc.
Fairfield, New Jersey

ABSTRACT

The U.S. Environmental Protection Agency (USEPA) is considering expanding the Toxic Release Inventory (TRI) to include releases from sanitary services including municipal solid waste (MSW) landfills. Information about release of TRI-listed chemicals from MSW landfills under federal community right to know laws is scattered throughout the literature and difficult for the general public to obtain. Reports prepared by the United States Environmental Protection Agency (USEPA) considering TRI expansion to include MSW landfills recognized the quantity and diversity of toxic compounds, some carcinogenic, present in landfill gases and leachate. Both the USEPA and the Occupational Health and Safety Administration (OSHA) have existing and complementary authorities which could get this information into the public domain without imposing a major regulatory burden. This two-part discussion summarizes existing literature on emissions of TRI-listed chemicals from landfills and examines the extent and limits of each agency's program evaluating Environmental Health and Safety impacts of landfill emissions.

BACKGROUND

Chemical releases from MSW landfills in general are well known to USEPA through its own documents and published literature. These data, while readily available to landfill operators and regulators, are not readily available to the general public or landfill workers and the surrounding communities. This data is scattered throughout various sources and, as noted below, is typically presented in units of concentration, not as simple quantities (e.g. pounds per year).

The USEPA is the federal government's lead for the Emergency Planning and Community Right-to-Know Act's [EPCRA] toxic release inventory [TRI] program. The TRI program is expressly intended to "inform the general public and the communities surrounding covered [industrial] facilities about releases of toxic chemicals" [40 CFR 372.1]. However, current statutory boundaries limit TRI reporting to certain manufacturing industries; Section 313(b)(1)(A) of the EPCRA only requires industries which

"manufacture, process or otherwise use" toxic chemicals and are grouped in standard industrial classification (SIC) codes 20 to 39 to inventory and report use and emissions of listed workplace chemicals. The USEPA is currently considering whether to expand the TRI reporting system to SIC Code 49, which includes electric, gas and sanitary services (including landfills, MSW combustors and wastewater treatment facilities).

Similarly, OSHA is the federal lead on health and safety regulation. Although potential health and safety concerns at landfills have been well documented, neither federal OSHA nor independent health or safety studies have addressed the need for greater landfill worker protection and workplace hazard evaluation. USEPA recently noted that "(n)either the Occupational Safety and Health Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH) or the Mine Safety and Health Administration (MSHA) has a publicly accessible database for tracking facility performance on toxics" (USEPA, 1995b).

Substances such as vinyl chloride, benzene, chloroform, and carbon tetrachloride have been found in many nonhazardous MSW landfills, sometimes at concentrations higher than those found at hazardous waste landfills (CARB, 1990), and in concentrations potentially of concern to landfill workers. New regulatory activity in the area of landfill health and safety is virtually nonexistent (FSC, 1995).

In the 1980's, OSHA and USEPA cooperated on OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) standard. The HAZWOPER standard focuses on protecting workers from health hazards at known hazardous waste sites where exposure conditions can be difficult to characterize or where the hazards are unknown. The strong overlap of USEPA and OSHA regulatory authorities addressing toxic emissions and health and safety virtually mandates they work together again if landfill workers and the public are to be better informed of landfill TRI chemical emissions.